

What is claimed is:

1. A method of manufacturing vacuum thermoformed thin plastic articles such as drink cup lids having a printable area within the boundaries thereof and formed by a die defining said articles and area comprising the steps of:  
hot melt extruding a thin web of plastic material;  
contacting the web with a vacuum thermoforming die configured to form said article and said area within said article;  
applying inks of at least two colors to said area after formation thereof but while said article remains in contact with said die; and  
separating said web and article from said die.
2. A method as defined in claim 1 wherein a portion of the printable area is raised relative to said web.
3. A method as defined in claim 1 wherein said die rotates as it is contacted by said web and as said articles are formed.
4. A method as defined in claim 3 wherein the die is metal and is mounted on a drum.
5. A method as defined in claim 1 wherein the step of applying ink is carried out by contacting the formed article with an ink pad.
6. A method as defined in claim 5 wherein the platen is disposed on a rotating drum and said ink plate rotates in synchronization with said drum.
7. A method as defined in claim 1 comprising the further step of die cutting said articles from said web.
8. A method defined in claim 1 wherein the plastic material is polystyrene.

9. The method defined in claim 1 wherein the ink is applied by means of a plate having indicia formed thereon.

10. A thermoformed thin plastic lid for drink cups comprising a raised rim defining a central printable area formed according to the method comprising the steps of:

- hot melt extruding a thin web of plastic material;
- contacting the web with a vacuum thermoforming platen configured to form said article and said area within said article;
- applying vacuum to said platen;
- applying ink of at least two colors to said area after formation thereof but while said article remains in contact with said platen; and
- separating said web and article from said platen.

11. Apparatus for vacuum thermoforming and printing articles in a substantially continuous fashion comprising:

- a vacuum thermoforming drum carrying regularly spaced thermoforming dies;
- at least two printing cylinders carrying printing plates disposed adjacent said drum for contacting and imparting ink to said articles as they are formed over said dies; and
- means for rotating said printing cylinders in synchronism with said drum.

12. Apparatus as defined in claim 11 further including an inking roller contacting said printing cylinder; and

- means for rotating said inking roller in synchronism with said printing cylinder.